

## SEMICONDUCTOR TYPE TWO PHASE LOCKED LOOP FILTER

### ABSTRACT OF THE DISCLOSURE

5           There is described a semiconductor Type Two phased  
locked loop filter having a passive capacitor part and a  
variable active resistor part, the variable active resistor  
part being integrated with the passive capacitor part.  
Integrating an active variable resistor will apply the same  
10 change to both poles and has no effect on the loop gain.  
The variable active resistor part is controlled by a  
resistor regulator circuit operating from a voltage that  
follows the type two phased locked loop voltage. The  
resistor regulator circuit is bootstrapped to the phased  
15 locked loop voltage using a voltage follower configured  
op-amp.